1. A wafer-holding pin comprising:

a distal portion adapted to hold a wafer exposed to an oxygen ion beam, the distal portion comprising a thermosetting resin material suitable for use in a vacuum environment operating at a temperature of about 250 C to about 650 C and able to withstand the oxygen ion beam without substantial oxidation; and

a proximal portion adapted to couple with a wafer-holding assembly.

2. The wafer-holding pin of claim 1, wherein the proximal portion comprises the thermosetting resin material.

3. The wafer-holding pin of claim 1, wherein the pin provides an electrical pathway between the wafer and the wafer-holding assembly.

4. The wafer-holding pin of claim 3, wherein the pin is electrically conductive.

5. The wafer-holding pin of claim 4, wherein the pin comprises a thermosetting resin filled with an electrically conductive material.

6. The wafer-holding pin of claim 5, wherein the conductive material is a metallic compound.

7. The wafer-holding pin of claim 4, wherein the pin comprises a electrically conductive coating.

8. The wafer-holding pin of claim 4, wherein the pin has a bulk resistivity below about 100 ohms per centimeter.

9. The wafer-holding pin of claim 1, further comprising

a longitudinal axis extending from the distal portion towards the proximal portion;

the distal portion having a head coupled to a flange with a wafer-receiving groove therebetween, wherein the groove is adapted to engage an edge of the wafer and has an inner surface that is at least partially cylindrical in shape.

10. The wafer-holding pin of claim 9, wherein the flange is angled in a direction away from the groove.

11. The wafer-holding pin of claim 10, wherein the angle is between approximately 5 degrees and approximately 45 degrees.

12. The wafer-holding pin of claim 1, wherein the pin is adapted to hold the wafer in a vacuum environment having a temperatures of between approximately 400 C and approximately 625 C.

13. The wafer-holding pin of claim 1, wherein the pin is adapted to hold the wafer in a vacuum environment having a temperature of between approximately 500 C and approximately 600 C.

14. The wafer-holding pin of claim 1, wherein the pin has a thermal conductivity below approximately 0.5 W/m deg. K.

15. The wafer-holding pin of claim 1, wherein the pin has a hardness of approximately equal to or less than the wafer.

16. The wafer-holding pin of claim 15, wherein the pin has a hardness of below approximately 6 on Mohs' hardness scale.

17. In an ion implanter comprising a wafer holder, the improvement of a wafer-holding pin comprising:

a distal portion adapted to hold a wafer, the distal portion comprising a thermosetting resin material suitable for use in a vacuum environment operating at a temperature of about 250 C to about 650 C and able to withstand an oxygen ion beam without substantial oxidation; and

a proximal portion adapted to couple with the wafer-holding assembly.

18. The ion implanter of claim 17, wherein the ion implanter comprises any of the group consisting of a plasma etch system and a plasma stripping system.

19. In an ion deposition system comprising a wafer holder, the improvement of a wafer-holding pin comprising:

a distal portion adapted to hold a wafer, the distal portion comprising a thermosetting resin material suitable for use in a vacuum environment operating at a temperature of between about 250 C and about 650 C and able to withstand an oxygen ion beam without substantial oxidation; and

a proximal portion adapted to couple with the wafer-holding assembly.

20. The ion deposition system of claim 19, wherein the ion deposition system comprises any of the group consisting of a chemical vapor deposition system, an ion assisted deposition system, and a sputtering deposition system.

21. A wafer-holding pin, comprising:

a distal portion for holding a wafer, the distal portion comprising a thermosetting resin material suitable for use in a vacuum environment operating at a temperature of between about 250 C and about 650 C and able to withstand an oxygen ion beam without substantial oxidation, the distal portion electrically conductive to provide an electrical pathway between the wafer and a wafer-holding assembly;

a proximal portion adapted to couple to the wafer-holding assembly; and

a longitudinal axis extending from the distal portion towards the proximal portion,

the distal portion having a head coupled to a flange with a wafer-receiving groove therebetween, wherein the groove is adapted to engage an edge of the wafer and has an inner surface that is at least partially cylindrical in shape.

22. The wafer-holding pin according to claim 21, wherein the inner surface exhibits radial symmetry about an axis for an azimuthal angle of at least 45 degrees.

23. The wafer-holding pin according to claim 22, wherein the flange is wider than the head.

24. The wafer-holding pin according to claim 21, wherein the proximal portion further comprises a post that mates with a wafer holder arm of the base structure.

25. The wafer-holding pin according to claim 21, wherein the distal portion further includes a electrically conductive filling.

26. The wafer-holding pin according to claim 25, wherein the electrically conductive filling is carbon.